UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Statistica (complementi)

1920-3-E1801M046-E1801M066M

Learning objectives

The course aims to present to students the main techniques in inference, in order to use them to solve decisional problems in the marketing business area.

Particular attention is paid to real aspects which can be encountered by the firm, in the solution of complex problems.

Contents

Inference

Detailed program

· Elements of probability theory

· main random variables

· Confidence intervals

- for the parameters of the normal distribution

- asymptotic confidence intervals: theory

- asymptotic confidence intervals for mean, variance and a relative frequency

· Tests of hypotheses

- statistical hypotheses, errors probability, critical region

- tests on the parameters of the normal distribution: unilateral alternative hypothesis

- tests on the parameters of the normal distribution: bilateral alternative hypothesis

· Testing equality of two means, and of two variances

· Pizzetti- Pearson’s test and the test of independence of two characters

· One way analysis of variance

· The linear model: confidence intervals and tests of hypotheses

· Multiple linear regression.

Prerequisites

Methods of univariate and bivariate descriptive statistics.

Teaching methods

6 credits: 40 hours of theoretical lectures and 12 hours of practical lectures.

Assessment methods

A written theme with exercises and theoretical questions, together with a theoretical test on the other part of the

course (quantitative market analysis). Then, the student will have a theoretical talk about the course program.

Textbooks and Reading Materials

Online

Slides in the e-learning website

References

M. Zenga *Modello probabilistico e variabili casuali*, Giappichelli.

M. Zenga *Inferenza statistica*, Giappichelli.

M. Zenga, *Metodi statistici per l'economia e l'impresa*, Giappichelli, 1994 (pp.1-44

and pp. 86-93).

Semester

Second semester

Teaching language

Italian